



IFC

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

		Application No.	10/750,549
		Filing Date	December 31, 2003
		First Named Inventor	Sumeet Sandhu
		Art Unit	2664
		Examiner Name	CHIN, Wellington
Total Number of Pages in This Submission	6	Attorney Docket Number	42P17433

### ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Response	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s)	
<input checked="" type="checkbox"/> PTO/SB/08	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Certified Copy of Priority Document(s)		
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Basic Filing Fee		
<input type="checkbox"/> Declaration/POA		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Gregory D. Caldwell, Reg. No. 39,926 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	December 6, 2005

### CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Typed or printed name	Gayle M. Bekish		
Signature		Date	December 6, 2005

Based on PTO/SB/21 (09-04) as modified by Blakely, Sokoloff, Taylor & Zafman (wlr) 11/30/2005.  
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450



# FEE TRANSMITTAL for FY 2005

*Patent fees are subject to annual revision.*

Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT (\$)

Complete if Known	
Application Number	10/750,549
Filing Date	December 31, 2003
First Named Inventor	Sumeet Sandhu
Examiner Name	CHIN, Wellington
Art Unit	2664
Attorney Docket No.	42P17433

## METHOD OF PAYMENT (check all that apply)

Check  Credit card  Money Order  None  Other (please identify): \_\_\_\_\_  
 Deposit Account Deposit Account Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

Charge fee(s) indicated below  Charge fee(s) indicated below, except for the filing fee  
 Charge any additional fee(s) or underpayment of fee(s)  Credit any overpayments  
under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20.

## FEE CALCULATION

### Large Entity      Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	
1403	1,000	2403	500	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
1809	790	1809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	

Other fee (specify) \_\_\_\_\_

SUBTOTAL (2) (\$)

Complete (if applicable)

Name (Print/Type)	Gregory D. Caldwell	Registration No. (Attorney/Agent)	39,926	Telephone	(503) 439-8778
Signature				Date	12/06/05



Docket No.: 42P17433

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

SUMEET SANDHU

Application No.: 10/750,549

Filed: December 31, 2003

For: **METHODS AND APPARATUS TO CONTROL  
TRANSMISSION OF A MULTICARRIER WIRELESS  
COMMUNICATION CHANNEL THROUGH MULTIPLE  
ANTENNAS**

Art Group: 2664

Examiner: CHIN, Wellington

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

In accordance with the duty of disclosure, enclosed is a copy of IDS Citation Form PTO/SB/08 or PTO-1449, together with copies of the documents cited on that form, except for copies not required to be submitted (e.g., copies of U.S. patents and U.S. published patent applications need not be enclosed). This IDS and IDS Citation Form are being submitted before the mailing of a first Office Action. It is respectfully requested that the cited references be considered and that the enclosed copy of PTO/SB/08 be initialed by the Examiner to indicate such consideration and a copy thereof returned to applicant(s).

The references were cited in a Search Report dated April 1, 2005 (copy enclosed herewith) in a counterpart PCT application.

The submission of this Information Disclosure Statement is not to be construed as a representation that a search has been made in the subject application and is not to be construed as an admission that the information cited in this statement is material to patentability.

Please charge any fees due to Deposit Account 02-2666. A duplicate copy of the Fee Transmittal (PTO/SB/17) is enclosed for this purpose.

Respectfully submitted,

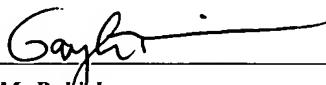
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: December 06, 2005

  
Gregory D. Caldwell, Reg. No. 39,926

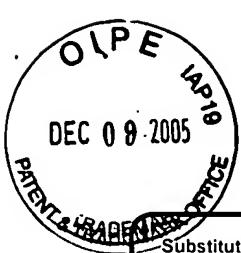
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Gayle M. Belknap

12-06-05

\_\_\_\_\_  
Date



DEC 09 2005

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Sheet

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of

2

***Complete if Known***

Application Number	10/750,549
Filing Date	December 31, 2003
First Named Inventor	Sumeet Sandhu
Art Unit	2664
Examiner Name	CHIN, Wellington
Attorney Docket Number	42P17433

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		YI GONG et al - "Space-frequency-time coded OFDM for broadband wireless communications" IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, 11/25/2001 pages 519-523 - XP001090309	
		QIAN MA et al - "Full diversity block diagonal codes for differential space-time-frequency coded OFDM" - IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, 12/1/2003 Pages 868-872, XP0106788446	
		WEIFENG SU et al - "Obtaining full-diversity space-frequency codes from space-time codes via mapping" - IEEE TRANSACTIONS ON SIGNAL PROCESSING - vol 51, no 11, November 2003, pages 2905-2916, XP001200809	
		ROUQUETTE et al - "orthogonal full diversity space-time block coding based on transmit channel state information for 4 Tx antennas" - IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS - 4/28/2002, pages 558-562, XP010589556	
		DIGGAVI et al - "Differential space-time coding for frequency selective channels" IEEE COMMUNICATIONS LETTERS, vol 6, no 6 June 2002, pages 253-255, XP001133259	
		WEIFENG SU et al - "Systematic design of space-frequency codes with full rate and full diversity" IEEE WIRELESS COMMUNICATIONS AND NETWORKING CONFERENCE, 3/21/2004, pages 1436-1441, XP010708121	
		JAGANNADHA RAO et al - "Low-complexity, full-diversity space-time-frequency block codes for MIMO-OFDM" IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, 11/29/2004, pages 204-208, XP010758881	

Examiner  
SignatureDate  
Considered

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<sup>1</sup>Applicant's unique citation designation number.<sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449A/PTO				<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	10/750,549
				Filing Date	December 31, 2003
				First Named Inventor	Sumeet Sandhu
				Art Unit	2664
				Examiner Name	CHIN, Wellington
				Attorney Docket Number	42P17433
Sheet	2	of	2		

## **NON PATENT LITERATURE DOCUMENTS**

Examiner Signature	Date Considered
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**\*Examiner:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

**\*Applicant's unique citation designation number? Applicant is to place a check mark here if English language Translation is attached.**

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